WESTINGHOUSE SUPERFUND SITE
Sunnyvale, California
EPA ID No. CAD001864081

EXPLANATION OF SIGNIFICANT DIFFERENCES

to the 1991 Record of Decision and 1997 Explanation of Significant Differences

September, 2008

I. INTRODUCTION

In October 1991, the United States Environmental Protection Agency ("EPA") issued a Record of Decision ("ROD"), selecting remedial actions to address contamination at the Westinghouse Superfund Site ("Site") in the City of Sunnyvale, California (the "City"). In 1997, EPA issued an Explanation of Significant Differences ("the 1997 ESD") that provided for certain modifications to the remedy selected in the ROD. The ESD that EPA is issuing at this time ("the 2008 ESD") provides for additional modifications to the selected remedy for the Site.

The Westinghouse ROD, executed on October 16, 1991, requires extraction and treatment of groundwater, containment of groundwater in the polychlorinated biphenyl ("PCB") source area, removal and off-site incineration of contaminated soil, institutional controls and monitoring. The 1997 ESD allowed soils from the North Parking Lot area of the Site containing PCBs at concentrations less than 500 parts per million ("ppm") to be disposed of at an appropriate hazardous waste landfill instead of by incineration. Soils with PCB concentrations exceeding 500 ppm still required incineration.

EPA is issuing the 2008 ESD to provide notice of modifications to the 1991 ROD and 1997 ESD, which do not fundamentally affect the selected remedial actions. The need for an additional decision document has arisen because of additional evidence of PCB contamination throughout the Site and the conclusions of EPA's 2006 Five Year Review. The purpose of the 2008 ESD is to provide for implementation of the Five Year Review recommendation to supplement the prior decision documents with an expanded Institutional Control ("IC") program to prevent unacceptable exposure to PCBs remaining in soils at the Westinghouse Site. The ESD requires ICs to restrict use of those portions of the Site with PCBs above unrestricted use levels. These areas encompass the entire Site and are shown on the attached Figure.

EPA is issuing this 2008 ESD to satisfy its responsibilities under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") Section 117(c) and the National Contingency Plan ("NCP") Section 300.435(c)(2)(i). This 2008 ESD and any comments regarding this 2008 ESD will become part of the Administrative Record for this site pursuant to NCP Section 300.825(a)(2). Copies of the Administrative Record are available for review at the following locations:

Sunnyvale Public Library
665 West Olive Avenue
Sunnyvale, California 94088
(408) 730-7300

EPA Region 9 Superfund Records Center
95 Hawthorne Street - Suite 403S
San Francisco, California 94105
(415) 536-2000

If additional, suitable information becomes available, EPA will revise the Administrative Record to reflect such material.

II. SITE BACKGROUND AND DESCRIPTION

The 75-acre Westinghouse property is located at 401 East Hendy Avenue in Sunnyvale, California. The property is bounded by California Avenue to the north, Hendy Avenue to the south, North Sunnyvale Avenue to the west, and North Fair Oaks Avenue to the east. In addition, a parking lot, referred to as the North Parking Lot area, is located on the north side of California Avenue. During the mid-1950s, Westinghouse manufactured transformers that contained mineral oil and Inerteen as insulating fluids. Inerteen was the Westinghouse trade name for an askarel consisting of approximately 60 percent PCB, more specifically Aroclor 1260, and 40 percent trichlorobenzene ("TCB").

Inerteen was stored in a 7,000 gallon aboveground storage tank. Mineral oil was also stored onsite in three 16,000 gallon aboveground storage tanks, and in one 20,000 gallon underground storage tank. Inerteen liquid and mineral oil were delivered from the tanks to two areas of the nearby Building 21 via underground piping. The Inerteen tank was removed from its location in the Reservoir 2 area in 1971. The mineral oil tanks were removed prior to 1974. Westinghouse also used Inerteen for weed control around the perimeter of the property, in the North Parking Lot area, and along railroad spurs located on the property.

Both soil and groundwater with the highest concentrations of chemicals of concern ("COCs") were discovered in the vicinity of the tanks. The PCB solubility limit of 2.7 parts per billion ("ppb") was frequently exceeded in samples collected from onsite wells located in the source area. Investigations also showed the presence of PCBs along the top of the A/B1 aquitard. A dense, non-aqueous phase liquid ("DNAPL") thickness of 2.8 feet was measured in well W48,

and a light, non-aqueous phase liquid ("LNAPL") thickness of 1.1 feet was discovered in well W3, which is located approximately 70 feet east of the former Inerteen tank. Concentrations of volatile organic compounds ranged up to 131 ppb in groundwater.

Contamination was also found in the soils beneath the underground pipelines that delivered chemicals to Building 21 for use in the manufacturing process. PCBs in soils often exceeded 500 ppm and ranged up to 28,000 ppm from the surface to depths of approximately 45 feet.

Lower concentrations of PCBs were found in other portions of the site where PCB-containing oils were applied as an herbicide along fence lines and railroad spurs.

III. ENFORCEMENT HISTORY AND SELECTED REMEDY

The California Regional Water Quality Control Board, San Francisco Bay Region ("Water Board") was the lead regulatory agency for the site from 1981 to 1987. The Water Board issued Order Nos. 84-63 and 85-94 in 1984 and 1985, respectively. Pursuant to these orders, Westinghouse conducted remediation of shallow soils outside the Reservoir 2 area, along the railroad spurs and fence lines of the property. PCBs remain in soils in these areas at levels above those acceptable for unrestricted use. However, it is acceptable for these PCBs to remain in place provided appropriate institutional controls are put in place and enforced pursuant to this ESD.

In October 1984, pursuant to Section 105 of CERCLA, 42 U.S.C. Section 9605, the Westinghouse Superfund Site was proposed for listing on the National Priorities List set forth at 40 C.F.R. Part 300, Appendix B. The listing was finalized on December 18, 1987. An

Administrative Order on Consent for the performance of a Remedial Investigation and Feasibility Study ("RI/FS") was signed by Westinghouse and EPA on August 29, 1988.

Pursuant to Section 117 of CERCLA, 42 U.S.C. Section 9617, EPA published a notice of completion of the Feasibility Study, and of the proposed plan for remedial action on June 1, 1991, and provided opportunity for public comment on the proposed remedial action. The public comment period opened on July 1, 1991 and closed on August 29, 1991.

On October 16, 1991, EPA signed a ROD, selecting the following remedy:

- Permanent containment, by means of groundwater extraction, of contaminated groundwater in the source area where DNAPLs are detected.
- Cleanup of groundwater in areas beyond the source area until contamination reaches acceptable health based levels.
- Treatment of the extracted groundwater to meet all Applicable or Relevant and Appropriate Requirements ("ARARs") identified in the ROD for this discharge, prior to discharge to the onsite storm sewer, unless an evaluation indicates that an alternative "end-use" for the treated effluent (such as use for facility process water) can be practicably implemented.
- Removal of contaminated soil containing greater than 25 parts per million ("ppm") PCB to a depth of eight feet.
- Filling the excavated areas with clean soil and installing an asphalt cap.
- Offsite incineration of excavated soils at a federally permitted facility.

- Institutional controls, such as land use restrictions, to prevent well construction (for water supply purposes) in source areas that remain contaminated. Excavation below the eight feet where soil has been removed will be restricted. Restrictions will also preclude excavation, other than temporary subsurface work in the upper eight feet and will require complete restoration of any disturbed fill or the asphalt cap once any such temporary work was completed.

- A requirement that EPA receive notification of any future intention to cease operations in, abandon, demolish, or perform construction (including partial demolition or construction) in Building 21.

- Permanent and ongoing monitoring of the affected aquifers to verify that the extraction system is effective in capturing and reducing the chemical concentrations and extent of the aqueous phase plume, and containing the aqueous phase contamination in the DNAPL source area.

The cleanup plan outlined in the ROD included leaving contamination above health-based levels in both soil and groundwater on the Site. In the absence of a known technology to effectively remove the DNAPL containing PCBs from the subsurface, a technical impracticability ("TI") waiver was invoked in the ROD. This legal mechanism waived the requirement to meet the ARAR for PCBs in the source area groundwater where DNAPL is present. The ROD requires that this area be permanently contained and that land use restrictions prevent access to this contamination. Compliance points were set at the perimeter of the DNAPL source area in the groundwater.

The soil cleanup level selected in the ROD reflects the 25 ppm Toxic Substances Control Act ("TSCA") level for a limited or restricted use industrial area. The ROD required a cap and restrictions on excavation for those areas where soil PCB concentrations exceed 25 ppm. The asphalt cap is subject to regular inspection, maintenance and repair. The aquifers were classified as a potential source of drinking water and cleanup goals (except for PCBs in the contained source area) were set at maximum contaminant levels ("MCLs").

- The 1997 ESD established a remedy change for soils in the North Parking Lot area. (Soil cleanup at the remainder of the Site had already been performed and was therefore not affected by the 1997 ESD.) The 1997 ESD allowed a change in the disposal method for soils contaminated with PCBs at less than 500 ppm; the change was from incineration to landfill disposal for soils removed from the North Parking Lot area with PCB concentrations less than 500 ppm only, where contamination is thought to have been a result of using PCB's as an herbicide. The landfill chosen for disposal was required to meet the requirements for TSCA Chemical Waste Landfills as described in 40 C.F.R. Section 761.75, and was required to be in compliance with the procedures for planning and implementing off-site response actions described in 40 C.F.R. Section 300.440. The 1997 ESD reaffirmed the 25 ppm cleanup level for PCBs at the Site and the need for institutional controls to restrict the entire site to industrial use only.

- All soils, including those removed from the North Parking Lot area, found during excavation with PCB concentrations greater than 500 ppm were to be incinerated as required in the 1991 ROD. (The 1997 ESD did not change the disposal method

for North Parking Lot area soils containing PCBs at concentrations higher than 500 ppm.) A portion of the North Parking Lot area was sold to Valin Corp. on July 31, 1997. This property remains a portion of the Westinghouse Superfund Site as defined at listing and is subject to the IC provisions of this 2008 ESD.

IV. DESCRIPTION OF 2008 ESD

The 2008 ESD includes a modification to both the 1991 ROD and 1997 ESD to clarify the ICs necessary to ensure the long-term protectiveness of the remedy. This ESD retains the ICs for the source area from the 1991 ROD and adds use restrictions for other areas throughout the Site where PCB contamination remains above levels suitable for unrestricted use. The ROD did not explicitly state ICs would restrict the use of the Site to commercial/industrial use; however, the ROD selected a cleanup level based on continued industrial use of the Site. This ESD calls for ICs to restrict use of the Westinghouse Site (including the portion of the North Parking Lot area sold to Valin Corp.) to industrial or commercial use only.

A risk-based screening level of 0.22 ppm for PCBs in residential soil is presented in EPA's May 20, 2008 Regional Screening Levels for Chemical Contaminants at Superfund Sites. Specific unrestricted use cleanup levels have not been established for the Westinghouse Site; should the Site (or portions of the Site) be proposed for unrestricted use in the future, EPA will address the appropriate cleanup levels for the intended reuse.

The 1991 ROD states, "[f]uture exposures to [chemicals of concern] at this site are expected to be consistent with those arising from a limited access industrial scenario." The 25 ppm PCB cleanup level selected in the ROD for soil is consistent with EPA's 1990 *Guidance on Remedial Actions for Superfund Sites with PCB Contamination* ("PCB Guidance") for sites

where the current and future land use is industrial. The guidance allows a PCB cleanup level to be set in the range of 10 ppm to 25 ppm for industrial or other low occupancy areas. In the ROD, EPA selected the upper end of this range as protective because the Site is almost completely paved and pathways of direct exposure to soil are unlikely to exceed the low occupancy scenario. A cleanup level of 25 ppm for an industrial use exposure scenario corresponds to a lifetime excess cancer risk of 3.4×10^{-5}, which is within the risk management range of 10^{-6} to 10^{-4} for CERCLA actions. However, the lack of complete exposure pathways due to pavement and other structures, and the relatively infrequent detections of PCBs exceeding 10 ppm, indicate the actual risk to Site occupants will be lower.

This ESD clarifies the institutional controls to be relied upon to ensure exposure to PCBs is consistent with the ROD considerations. Areas where PCBs equal or exceed 25 ppm will continue to be covered by an asphalt or other pavement cap as required in the ROD. This action is consistent with the findings of the 2006 Five Year Review, which found the remedy protective if exposure meets the limited access industrial requirements in TSCA and EPA's PCB Guidance. The minor areas not covered by pavement are generally only in the immediate vicinity of fence posts or other structures that prevent occupancy, thereby reducing the potential exposure of site workers. Any future subsurface excavation work must be conducted in accordance with a Soils Management Plan approved by EPA and DTSC. Details of the cap and cover operation and maintenance, including regular inspections, repair, and reporting, will be set forth in the Land Use Covenant Implementation Plan.

To ensure long term protectiveness, this ESD requires that institutional controls be put in placed to prohibit sensitive uses (i.e., non-industrial/non-commercial) and ensure that the ROD

assumptions regarding land use will remain valid. Areas where PCBs remain above the unrestricted use cleanup levels shall be restricted to industrial or commercial use only. Since PCBs occur in many areas of the Site at concentrations exceeding those appropriate for unrestricted use, the entire site will be restricted. The attached Figure details the area to be restricted.

ICs are non-engineered mechanisms used to implement land use restrictions to prevent human exposures to hazardous materials, hazardous wastes or constituents, or hazardous substances remaining on the property; and to ensure the integrity of the remedial action. The ICs in this case will allow the California Department of Toxic Substances Control ("DTSC") and their authorized agents, employees and contractors access to the property to maintain and ensure the effectiveness of the remedial action, as necessary. EPA will attain access consensually by agreement with the property owner or through its statutory and regulatory authorities, if necessary.

The selected IC at this Site will be: in areas where hazardous materials, hazardous wastes or constituents, or hazardous substances will remain at the property at levels which are not suitable for unrestricted use of the land (the entire Site). The land use restrictions will be required and implemented through a Land Use Covenant/Environmental Restriction ("Land Use Covenant" or "Covenant") pursuant to California Civil Code section 1471 and Title 22 of the California Code of Regulations ("22 C.C.R.") section 67391.1. The Land Use Covenant shall be entered into by the owner(s) with DTSC, naming EPA as a third-party beneficiary, and recorded in the County records. The Land Use Covenant will carry restrictions such as are necessary to ensure the protectiveness of and prevent damage to or interference with the remedial action. Additionally, monitoring, inspections, and reporting will be conducted to ensure compliance with the land use restrictions.

The Covenant shall run with the land and bind all successive owners and occupants. EPA has identified California Civil Code Section 1471(a) as relevant and appropriate. Section 1471 specifies how environmental covenants are recorded and made applicable to successors. This is a substantive requirement because it is necessary in order for the restrictions to run with the land.

This ESD requires compliance with those substantive portions of 22 CCR section 67391.1 identified as relevant and appropriate and includes a requirement for an implementation and enforcement plan for the institutional controls to ensure the effectiveness of the remedy. The substantive portions of the following provisions of 22 CCR section 67391.1 have been identified as relevant and appropriate requirements: Title 22, CCR, Section 67391.1 (a), (b), (d), (g), and (i).

The Institutional Controls objectives to be achieved through land-use restrictions at the Westinghouse Site pursuant to California Civil Code section 1471 and 22 C.C.R. section 67391.1 include:

- Prohibit sensitive uses such as residential, parks, hospitals, schools, child care facilities, and hospices, where hazardous materials, hazardous waste, or hazardous substances will remain above levels which allow for unrestricted use;
- Other than remediation performed by (or overseen by) the regulatory agencies (EPA and DTSC) as approved under this ESD, the prior ESD, or the ROD, prohibit groundwater extraction and/or usage without prior reviews and written approval of the CERCLA lead agency;
- Other than remediation performed by (or overseen by) the regulatory agencies as approved under this ESD, the prior ESD, or the ROD, prohibit the alteration,

disturbance, or removal of groundwater extraction/monitoring wells and any associated piping and equipment without the review and written approval of the CERCLA lead agency;

- Other than remediation performed by (or overseen by) the regulatory agencies as approved under this ESD, the prior ESD, or the ROD, prohibit any alteration, disturbance, or excavation of soil and caps without a soil management plan approved by the regulatory agencies;
- Any contaminated soils brought to the surface by grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal law; and
- Other than remediation performed by (or overseen by) the regulatory agencies as approved under this ESD, the prior ESD, or the ROD, the Owner shall provide EPA written notice at least thirty (30) days prior to any building, filling, grading, or excavating at the property.

V. SUPPORT AGENCY AND COMMUNITY COMMENTS

As required by 40 C.F.R. 300.515(h)(3), EPA has provided DTSC an opportunity to review and comment on the changes in the 2008 ESD. DTSC concurred with this ESD on September 30, 2008.

VI. STATUTORY DETERMINATIONS

This 2008 ESD requires an ICs program to support the remedial action, which affects the

scope of the ROD and 1997 ESD by adding an additional protective measure to the remedial actions, and is significant. Because the institutional control program does not otherwise affect the scope, performance or cost of the selected remedial actions, the change is not fundamental. The selected remedial actions in the ROD and 1997 ESD remain otherwise unchanged, and will continue to meet all ARARs described in the ROD and to be protective of human health and the environment. The remedial actions will continue to be cost effective.

VII. PUBLIC PARTICIPATION ACTIVITIES

Pursuant to 40 C.F.R. Section 300.435(c)(2)(i), a formal public comment period is not required for an ESD to a ROD when the difference does not fundamentally alter the remedial actions with respect to scope, performance or cost. This ESD does not propose a fundamental change to the remedies in the 1991 ROD and 1997 ESD with respect to scope, performance or cost, and therefore, no formal public comment period is required. EPA will make this ESD and supporting information available for public review through the Administrative Record and information repository for the Westinghouse Superfund Site. Additionally, EPA will publish in the San Jose Mercury News, a newspaper of general circulation in the Site community, a notice that briefly summarizes this ESD, including the reasons for such differences.

Kathleen Salyer
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9/30/08
Date

Photo Source: Google 2005

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Legend

Property currently owned by Northrop Grumman

Eastern portion of north parking lot formerly owned by Northrup Grumman

Note: Both areas subject to use restrictions

0 400 800

scale in feet

Site Plan
Westinghouse Sunnyvale Superfund Site
Sunnyvale, California

Geosyntec consultants

Guelph | September 2007

Figure 1